

Please add the following new claims:

20. (New) A kit for increasing the target-specific toxicity of a drug, comprising:

a. a targeting composition selected from the group consisting of:

an antibody or antibody fragment which specifically binds to a target site, conjugated to an enzyme that converts a detoxified drug to its more cytotoxic form; and

a bispecific antibody or antibody fragment which has at least one binding site specific to the target site and another binding site specific to an enzyme or to a recognition hapten bound to an enzyme, wherein the enzyme converts a detoxified drug to a cytotoxic form, and said enzyme or said enzyme-recognition hapten; and

b. a cytotoxic drug or a prodrug of a cytotoxic drug other than a glucuronide, wherein said cytotoxic drug is converted to a detoxified metabolite by a mammal's ordinary metabolic processes and said detoxified metabolite is converted into said cytotoxic drug by said enzyme,

wherein said enzyme is selected from the group consisting of an abzyme, a mutated form of a natural enzyme, and a synthetic or semi-synthetic catalytic molecule.

21. (New) The kit of claim 20, wherein said enzyme is a glycosylase, an esterase, an amidase, or a sulfatase.

22. (New) The kit of claim 20, wherein said cytotoxic drug or prodrug is used in cancer chemotherapy.

23. (New) The kit of claim 22, wherein said cytotoxic drug or prodrug is a camptothecin or an anthracycline derivative.

24. (New) The kit of claim 23, wherein said cytotoxic prodrug is selected from the group consisting of CPT-11, topotecan, DX8951f, rubitecan, doxorubicin, and epirubicin.

25. (New) The kit of claim 20, wherein said cytotoxic prodrug comprises a polymer with multiple drug addends.

26. (New) The kit of claim 25, wherein said cytotoxic prodrug comprises a polymer bearing camptothecin or anthracycline addends.

27. (New) The kit of claim 25, wherein said polymer is a dextran, aminodextran, polyethylene glycol, polylysine, polyaspartic acid, polyglutamic acid or dendrimer.

28. (New) The kit of claim 20, wherein said cytotoxic drug or prodrug is used along with a modulating agent to alter the serum concentration of its detoxified metabolite.

29. (New) The kit of claim 28, wherein said modulating agent is cyclosporin A, valproic acid or phenobarbital.

30. (New) The kit of claim 20, wherein said enzyme, antibody or antibody fragment, or bispecific antibody or antibody fragment is murine, chimeric, humanized, or human in origin.

31. (New) The kit of claim 20, wherein said target site is a cancer, an infectious and parasitic lesion, a fibrin clot, a myocardial infarction, an atherosclerotic plaque, a damaged normal cell, a non-cancerous, or a lymphocyte autoreactive clone.

32. (New) The kit of claim 20, wherein said antibody or antibody fragment, or said bispecific antibody or antibody fragment specifically binds to a surface receptor that is qualitatively distinct for a cancer cell or quantitatively increased in a cancer cell as compared to a non-cancer cell.

33. (New) The kit of claim 32, wherein said receptor is a sheep erythrocyte receptor, a hormone receptor, a transferrin receptor, an Fc immunoglobulin receptor, or a nerve growth factor receptor.

34. (New) The kit of claim 33, wherein said hormone receptor is an estrogen receptor.

35. (New) The kit of claim 20, wherein said antibody or antibody fragment specifically binds to a marker or a substance produced by or associated with a tumor.

36. (New) The kit of claim 35, wherein said marker is a T-cell or B-cell marker associated with lymphomas or leukemias.

37. (New) The kit of claim 35, wherein said substance is an antigen associated with myeloma, glioma, or melanoma.

38. (New) The kit of claim 20, wherein said antibody or antibody fragment specifically binds to a marker, an antigen or a product produced by or associated an infectious lesion caused by viral, bacterial, fungal, or parasitic infections.

39. (New) The kit of claim 20, wherein said antibody or antibody fragment specifically binds to a CEA antigen.

40. (New) The kit of claim 20, further comprising a clearing agent for said enzyme.

41. (New) The kit of claim 40, wherein said clearing agent is a secondary antibody reactive with some part of said targeting composition.

42. (New) The kit of claim 41, wherein said clearing agent is an intact antibody, a fragment of an antibody, or a derivative of an antibody with mono- or multi-valent binding to another moiety.

43. (New) The kit of claim 41, wherein said clearing agent is further substituted with a second agent to enhance circulatory clearance.

44. (New) The kit of claim 43, wherein said second agent is a galactosyl residue.

45. (New) The kit of claim 40, wherein said clearing agent is a high MW protein-bearing hapten recognized by one of the arms of the bsMAb.

46. (New) The kit of claim 45, wherein said protein-bearing hapten is a conjugate comprising human serum albumin and DTPA.